a plurality of optical cross-connect mirror substrates, each of which includes a mirror comprising monocrystalline silicon, a frame comprising monocrystalline silicon that is spaced apart from and at least partially surrounds the mirror and at least two hinges between the mirror and the frame;

a base substrate including a face; and

a mounting structure that is configured to mount the frames of the plurality of optical cross-connect mirror substrates on the face.

25. (New) An optical cross-connect switch module according to Claim 24 wherein the frame is a first frame, each of the optical cross-connect mirror substrates also comprising an insulator layer on the first frame, opposite the mounting structure, and a second frame that is thicker than the first frame, on the insulator layer opposite the first frame.

26. (New) An optical cross-connect switch module according to Claim 24 wherein the mirror includes a pair of opposing faces and wherein each of the optical cross-connect mirror substrates further comprises a metal layer on each of the opposing faces of the mirrors.

27. (New) An optical cross-connect switch module according to Claim 27 wherein the mounting structure comprises a plurality of solder bumps that are configured to mount the plurality of optical cross-connect mirror substrates on the face.

28. (New) An optical cross-connect module according to Claim 27 wherein each of the optical cross-connect mirror substrates further comprises an underbump metallurgy between the frame and the solder bumps and wherein the underbump metallurgy and the metal layer on the optical cross-connect mirror substrate that is adjacent the base substrate both comprise a same metal.

29. (New) An optical cross-connect switch mirror module according to Claim 24 wherein each of the optical cross-connect mirror substrates includes an array of M

rows and N columns of optical cross-connect mirrors thereon and wherein the mounting structure is configured to mount the plurality of optical cross-connect mirror substrates in an array of R rows and S columns on the face to thereby provide a tiled array of M x R rows and N x S columns of the optical cross-connect mirrors in the optical cross-connect mirror module.

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30. (New) A MEM mirror module according to Claim 7 wherein the second frame comprises monocrystalline silicon.

31. (New) A MEM mirror according to Claim 8 wherein the metal layer on each of the opposing faces of the mirrors comprises a reflective metal layer on each of the opposing faces of the mirrors.